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INL Sitewide Institutional Controls Annual Report—FY 2005

September 2005

Idaho Cleanup Project

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ABSTRACT

This document reports the results of the fiscal year 2005 institutional controls assessment at Comprehensive Environmental Response, Compensation, and Liability Act sites at the Idaho National Laboratory. These activities are described in the *INEEL Sitewide Institutional Controls Plan*. Inspections were performed by Long-term Stewardship Program personnel with representatives of the various facilities.

The assessment showed that the various institutional control measures in place across the Idaho National Laboratory Site are functioning as intended. Information in the *Idaho National Engineering and Environmental Laboratory Comprehensive Facilities and Land Use Plan* was reviewed as part of the annual assessment and was revised as needed to reflect the current status of the institutional control sites.

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TABLES

ACRONYMS

ANL-W	Argonne National Laboratory-West
ARA	Auxiliary Reactor Area
BORAX	Boiling Water Reactor Experiment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFA	Central Facilities Area
CFLUP	Comprehensive Facility and Land Use Plan
CITRC	Critical Infrastructure Test Range Complex
DOE-ID	U.S. Department of Energy Idaho Operations Office
EBR	Experimental Breeder Reactor
FY	fiscal year
IET	Initial Engine Test
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
MFC	Materials and Fuels Complex
NRF	Naval Reactors Facility
NSD	Notice of Soil Disturbance
OCVZ	organic contamination in the vadose zone
OU	operable unit
PBF	Power Burst Facility
RTC	Reactor Technology Complex
RWMC	Radioactive Waste Management Complex
TAN	Test Area North
TRA	Test Reactor Area
TSF	Technical Support Facility
WAG	waste area group
WRRTF	Water Reactor Research Test Facility

INL Sitewide Institutional Controls Annual Report—FY 2005

1. INTRODUCTION

In accordance with guidance from the U.S. Environmental Protection Agency, institutional controls have been implemented where hazards to human health or the environment are present at the Idaho National Laboratory (INL) Site. Institutional controls include a variety of non-engineered controls. They are used during remedial actions and, if hazards remain, after remediation at sites regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Institutional controls are assessed annually to ensure that the controls are operating in accordance with their intended purpose. This report describes the fiscal year (FY) 2005 assessment of the institutional controls at the INL Site.

The INL Site occupies 890 mi^2 in southeast Idaho and consists of nine primary facility areas situated on an expanse of otherwise undeveloped, high-desert terrain. Buildings and structures at the INL Site are clustered within these primary facility areas, which are typically less than a few square miles in size and separated from each other by a buffer of primarily undeveloped land. The undeveloped land is used for environmental research, ecological preservation, socio-cultural preservation, grazing, and limited big game hunting.

Under a federal facilities agreement and consent order (DOE-ID 1991), the INL Site was divided into 10 waste area groups (WAGs) to facilitate environmental remediation efforts. The boundaries of WAGs 1 through 9 generally correspond to those of the primary facility areas at the INL Site, and WAG 10 comprises the remaining land within the INL Site boundaries (Figure 1):

- WAG 1—Test Area North (TAN)
- WAG 2—Reactor Technology Complex (RTC), formerly the Test Reactor Area (TRA)
- WAG 3—Idaho Nuclear Technology and Engineering Center (INTEC)
- WAG 4—Central Facilities Area (CFA)
- WAG 5—Auxiliary Reactor Area (ARA)/Critical Infrastructure Test Range Complex (CITRC), formerly the Power Burst Facility (PBF)
- WAG 6—Boiling Water Reactor Experiment (BORAX)
- WAG 7—Radioactive Waste Management Complex (RWMC)
- WAG 8—Naval Reactors Facility (NRF)
- WAG 9—Materials and Fuels Complex (MFC), formerly Argonne National Laboratory-West (ANL-W)
- WAG 10—INL Sitewide Area.

This report is divided into sections that correspond to each WAG under the control of the U.S. Department of Energy Idaho Operations Office (DOE-ID). This report does not discuss WAG 8 (i.e., NRF) further, because it falls outside the control of DOE-ID. The 2005 inspection log is recorded and stored in the Long-term Stewardship files.

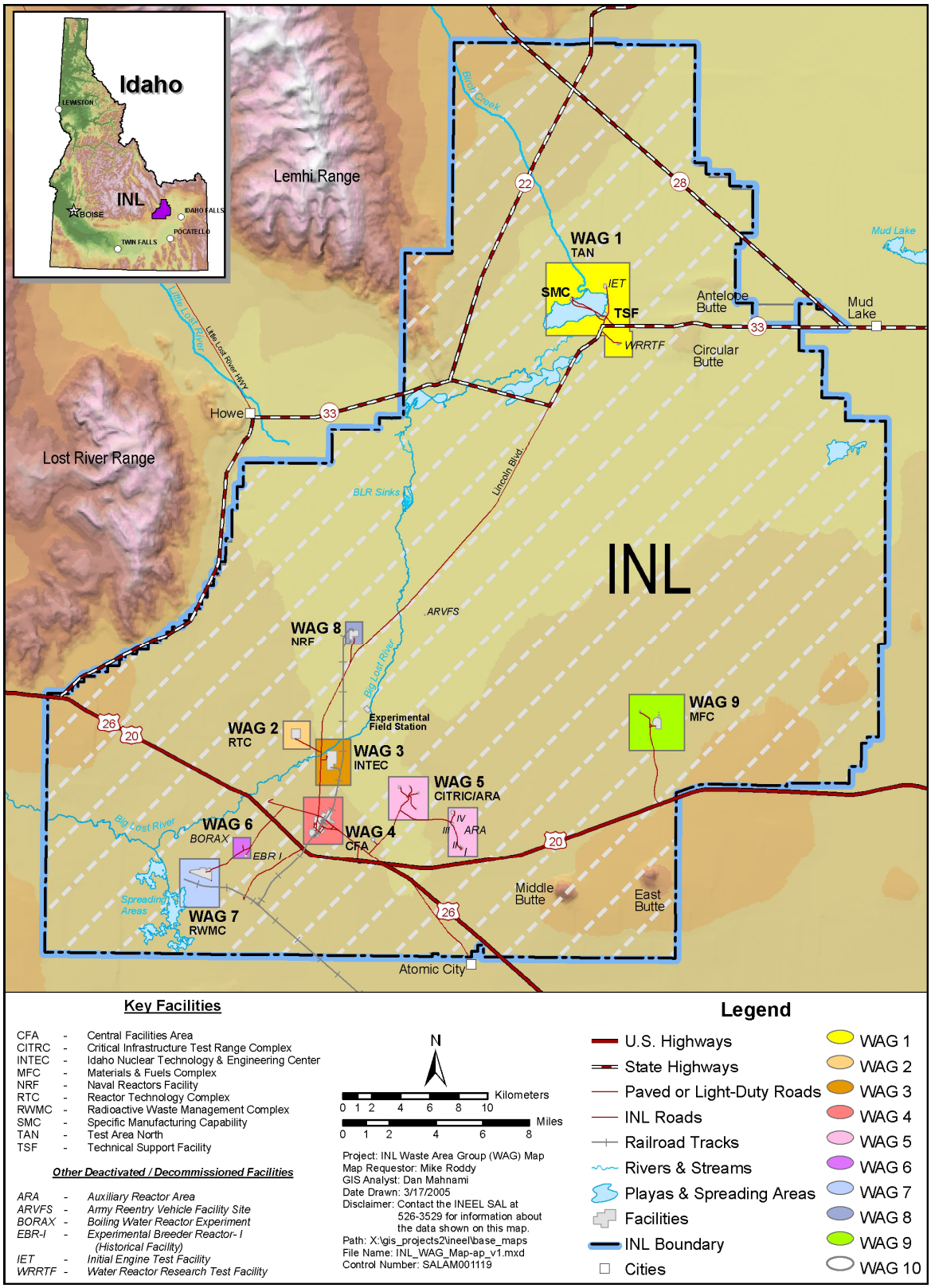

Figure 1. WAG locations at the INL Site.

Information in the *Idaho National Engineering and Environmental Laboratory Comprehensive Facilities and Land Use Plan* (CFLUP) (DOE-ID 1997) was reviewed as part of the annual assessment and was revised as needed to reflect the current status of the institutional control sites.

2. WAG 1, TEST AREA NORTH

Designated as WAG 1, TAN is located in the north-central portion of the INL Site and comprises approximately 102 acres. The original TAN facilities were built between 1954 and 1961 to support the Aircraft Nuclear Propulsion Program. Upon termination of that research in 1961, the area facilities were converted to support a variety of other U.S. Department of Energy research projects. From 1962 through the 1980s, the area supported reactor safety testing at the Loss-of-Fluid Test Facility. Beginning in 1980, TAN was used to conduct research on material from the 1979 Three-Mile Island reactor accident. That material has been relocated to storage at INTEC. Current activities at TAN include the ongoing work at the Specific Manufacturing Capability Facility. Operational activities have ceased at other TAN facilities, and closure of TAN is in progress.

Twenty institutionally controlled areas were assessed on May 12, 2005. They were Initial Engine Test (IET)-04, Technical Support Facility (TSF)-05, TSF-06 Area 1, TSF-06 Area 5, TSF-06 Area 11, TSF-06 Area B, TSF-07, TSF-08, TSF-09, TSF-10, TSF-18, TSF-23, TSF-26, TSF-28, TSF-29, TSF-39, TSF-42, TSF-43, and Water Reactor Research Test Facility (WRRTF)-01. Refer to Table 1 for the results of the 2005 assessment.

Table 1. Institutional control sites inspection at WAG 1.

Site	Signs	Comments	CFLUP Review
IET-04	Good condition	None	No change
TSF-03	Removed from site	Remedy complete	Removed record
TSF-05	Good condition	None	No change
TSF-06 Area 1	Good condition	None	No change
TSF-06 Area 5	Good condition	None	No change
TSF-06 Area 11	Good condition (at west end only)	Construction zone on east section of ditch only	No change
TSF-06 Area B	Good condition	None	Remedy complete
TSF-07	Good condition	None	No change
TSF-08	Good condition	None	No change
TSF-09	None	Construction zone	Remedy in progress
TSF-10	Good condition	None	No change
TSF-18	None	Construction zone	Remedy in progress
TSF-23	Good condition	None	No change
TSF-26	Good condition	None	Remedy complete
TSF-28	Good condition	None	No change
TSF-29	Good condition	None	No change
TSF-39	Good condition	None	No change
TSF-42	Sign missing	Replacement obtained	No change
TSF-43	Good condition	Buildings removed	Revised
WRRTF-01	Good condition	None	Remedy complete

Remediation of TSF-03 is complete, and all hazards have been removed. Therefore, the site is reclassified as a "No Action" site, the institutional control signs have been removed, and the record in the CFLUP has been removed. The TSF-26 site remedy has also been completed, but TSF-26 will remain an institutionally controlled site, because hazards remain. TSF-09 and TSF-18 are being remediated. The signs are not in place, but the area is controlled as a CERCLA remediation site. The staging of the equipment for this remedy resulted in the east part of the TSF-06 Area 11 ditch being filled to support process equipment. The east sign for TSF-06 Area 11 is removed. The sign on the west end of the ditch is in place. At TSF-43, the Radioactive Parts Security Storage Area, the buildings have been removed, but contamination remains under the asphalt pad. The institutional control sign remains in place at the bully barn access point. The sign for TSF-42 is missing due to building removal in the area. This sign is being replaced. The sign for TSF-08 has been relocated temporarily due to heavy equipment in the area. The sign will be put in place permanently when the construction is finished. Institutional controls at WAG 1 are otherwise in place and function properly.

The TSF-05 and TSF-23 sites are associated with Operable Unit (OU) 1-07B, groundwater contamination beneath TAN. Numerous wellheads and well houses were visited on May 12, 2005, as part of the annual institutional controls inspection. Refer to Table 2 for a listing of the WAG 1 wells visited in 2005. The conditions were wet due to heavy spring rainfall in 2005, and some wells could not be accessed because of impassible roads, as noted in Table 2. All wells visited were found to be secured and properly labeled. No repairs or maintenance actions were recommended.

Table 2. TSF-23—WAG 1 wells assessed in 2005.

Well Number	Well Number	Well Number	Well Number
ANP-8	TAN-11	TAN-29	TAN-46 inaccessible
GIN-1	TAN-12	TAN-30A	TAN-47 inaccessible
GIN-2	TAN-13A inaccessible	TAN-31	TAN-48
GIN-3	TAN-14 inaccessible	TAN-32	TAN-49
GIN-4	TAN-15	TAN-33	TAN-50
GIN-5	TAN-16	TAN-34	TAN-51 inaccessible
TAN-1	TAN-17 inaccessible	TAN-35	TAN-52
TAN-2	TAN-18	TAN-36 inaccessible	TAN-53A
TAN-3	TAN-19	TAN-37	TAN-54 inaccessible
TAN-4	TAN-20 inaccessible	TAN-38	TAN-55
TAN-5	TAN-21	TAN-39	TAN-56
TAN-6	TAN-MW-2	TAN-40	TAN-57
TAN-7	TAN-22A	TAN-41	TAN-58
TAN-8 inaccessible	TAN-23A	TAN-42	TAN-CH1
TAN-9	TAN-24A	TAN-43	TAN-CH2 inaccessible
TAN-10	TAN-25	TAN-44	TSF-05
TAN-10A	TAN-26	TAN-45	USGS-24
TAN-27	TAN-1859	TAN-D1	TAN-1861
TAN-28	TAN-1860	TAN-D2	

The WAG 1 CFLUP records (DOE-ID 1997) were reviewed and updated as part of the FY 2005 assessment. These records are published electronically at http://cflup.inel.gov. New photographs were obtained for many WAG 1 sites and are now in the CFLUP. TSF-03 is no longer included in the CFLUP, because all hazards have been removed and TSF-03 is now a "No Further Action" site.

3. WAG 2, REACTOR TECHNOLOGY COMPLEX

The RTC, designated as WAG 2, was established in the early 1950s to study the effects of radiation on materials, fuels, and equipment. Three major reactors have been built at the RTC: the Materials Test Reactor, the Engineering Test Reactor, and the Advanced Test Reactor. The Advanced Test Reactor is currently the only major operating reactor at the RTC. In addition to operation of the reactor, various laboratory facilities are used for isotope production, broad-based research, development, analysis, and testing.

Fourteen institutionally controlled sites are located at WAG 2: TRA-03, TRA-04, TRA-06, TRA-08, TRA-13, TRA-13-SCA, TRA-15, TRA-19, TRA-34, TRA-X, TRA-Y, TRA-619, TRA-626, and TRA-653. These sites were assessed on April 27, 2005. The institutional controls were found to be in good condition, and all warning signs were legible and placed correctly. Refer to Table 3 for the results of the 2005 assessment at WAG 2.

Table 3. Institutional control sites inspection at WAG 2.

Site	Signs	Comments	CFLUP Review
TRA-03	Good condition	None	No change
TRA-04	Good condition	None	No change
TRA-06	Good condition	None	No change
TRA-08	Good condition	None	No change
TRA-13	Good condition	None	No change
TRA-13-SCA	Good condition	None	No change
TRA-15	Good condition	None	No change
TRA-19	Good condition	None	No change
TRA-34	Good condition	None	No change
TRA-X	Good condition	None	No change
TRA-Y	Good condition	None	No change
TRA-619	Good condition	None	No change
TRA-626	Good condition	None	No change
TRA-653	Good condition	None	No change

The WAG 2 CFLUP records (DOE-ID 1997) were reviewed and updated as part of the FY 2005 assessment. The records are published electronically at http://cflup.inel.gov. New photographs were obtained for most WAG 2 sites and have been uploaded to the electronic version of the CFLUP.

4. WAG 3, IDAHO NUCLEAR TECHNOLOGY AND ENGINEERING CENTER

INTEC, designated as WAG 3, began receiving, storing, and reprocessing nuclear materials in 1953. The nuclear materials included irradiated nuclear fuel from test, defense, and research reactors in the United States and other countries. Between 1954 and 1989, the INL Site received defense-related waste for storage. Facilities at INTEC (formerly the Idaho Chemical Processing Plant) were also used to reclaim highly enriched uranium by reprocessing spent nuclear fuel from 1954 to 1992. Currently, the INTEC mission includes receiving and temporarily storing spent nuclear fuel and other radioactive wastes, managing waste, and performing remedial actions.

Known contaminant releases at WAG 3 are the result of spent nuclear fuel reprocessing; storage, research, and ancillary activities; and releases associated with the INTEC tank farm. The WAG 3 release sites requiring remedial action have been categorized into seven groups according to shared characteristics or common contaminant sources. Other sites are classified as "No Action" and "No Further Action" sites. Institutional controls are a part of the remedy for each of the seven groups and for the "No Further Action" sites. The 2005 WAG 3 institutional controls inspection was conducted on June 22, 2005. The results of the visit are noted by group in Tables 4 through 10. Refer to http://cflup.inel.gov for information on specific sites, such title, description, cleanup schedule, and contaminants of concern.

Table 4. Institutional control sites inspection at WAG 3, Group 1 (tank farm soil).

Site	Signs	Comments	CFLUP Review
CPP-15	Good condition	None	No change
CPP-58	Good condition	None	No change
CPP-96	Good condition	None	No change

Table 5. Institutional control sites inspection at WAG 3, Group 2 (soil under buildings).

Site	Signs	Comments	CFLUP Review
CPP-02	Good condition	None	No change
CPP-41	Good condition	None	No change
CPP-60	Good condition	None	No change
CPP-68	Good condition	None	No change
CPP-80	Good condition	None	No change
CPP-85	Good condition	None	No change
CPP-86	Good condition	None	No change
CPP-87	Good condition	None	No change
CPP-89	Good condition	None	No change

Table 6. Institutional control sites inspection at WAG 3, Group 3 (other surface soil).

Site	Signs	Comments	CFLUP Review
CPP-01	Good condition	None	No change
CPP-03	Good condition	None	No change
CPP-04/05	Good condition	None	No change
CPP-08/09	Good condition	None	No change

Table 6. (continued).

Site	Signs	Comments	CFLUP Review
CPP-10	Good condition	None	No change
CPP-11	Construction zone	Remount sign post-construction	No change
CPP-13	Good condition	None	No change
CPP-14	Good condition	None	No change
CPP-19	Good condition	None	No change
CPP-34	Good condition	Remediation in progress in 2005	Revised
CPP-35	Good condition	None	No change
CPP-36	Good condition	None	No change
CPP-37a	Good condition	Inaccessible; in CPP-34 work zone	No change
CPP-37b	Good condition	None	No change
CPP-37c	Good condition	None	No change
CPP-44	Good condition	None	No change
CPP-48	Good condition	None	No change
CPP-55	Good condition	None	No change
CPP-67	No longer needed	Completion report pending	Revised
CPP-91	Good condition	None	No change
CPP-92	Good condition	None	No change
CPP-93	Good condition	None	No change
CPP-97	Good condition	None	No change
CPP-98	Good condition	None	No change
CPP-99	Good condition	None	No change

Table 7. Institutional control sites inspection at WAG 3, Group 4 (perched water wells).

Well Number	Label	Locked		Well Number	Label	Locked
CPP-33-1	Yes	Yes		MW-8	Inaccessible	
CPP-33-2	Yes	Yes		MW-9	Inaccessible	
CPP-33-3	Yes	Yes		MW-10	Yes	Yes
CPP-37-4	Yes	Yes		MW-11	Yes	Yes
CPP-55-06	Yes	Yes		MW-12	Yes	Yes
PW-1	Yes	Yes		MW-13	Yes	Yes
PW-2	Yes	Yes		MW-14	Yes	Yes
PW-3	Yes	Yes		MW-15	Inaccessible	
PW-4	Inaccessible			MW-16	Yes	Yes
PW-5	Inaccessible			MW-17	Yes	Yes
PW-6	Inaccessible			MW-18	Yes	Yes
MW-1	Yes	Yes		MW-20	Yes	Yes
MW-2	Yes	Yes		USGS-50	Yes	Yes
MW-3	Inaccessible			CPP-33-4-1	Yes	Yes

Table 7. (continued).

Well Number	Label	Locked		Well Number	Label	Locked
MW-4	Yes	Yes		CPP-33-4-2	Yes	Yes
MW-5	Yes	Yes		1236-ICPP-S-132	Yes	Yes
MW-6	Yes	Yes		1385-ICPP-SCI-P-216	Yes	Yes
MW-7	Yes	Yes		1386-ICPP-SCI-P-217	Yes	Yes
1387-ICPP-SCI-P-218	Yes	Yes		1397-ICPP-SCI-P-228	Yes	Yes
1388-ICPP-SCI-P-219	Yes	Yes		1398-ICPP-SCI-P-229	Yes	Yes
1389-ICPP-SCI-P-220	Yes	Yes		1399-ICPP-SCI-P-230	Yes	Yes
1390-ICPP-SCI-P-221	Yes	Yes		1400-ICPP-SCI-P-247	Yes	Yes
1391-ICPP-SCI-P-222	Yes	Yes		1401-ICPP-SCI-P-248	Yes	Yes
1392-ICPP-SCI-P-223	Yes	Yes		1402-ICPP-SCI-P-249	Yes	Yes
1393-ICPP-SCI-P-224	Yes	Yes		1403-ICPP-SCI-P-250	Yes	Yes
1394-ICPP-SCI-P-225	Yes	Yes		1404-ICPP-SCI-P-251	Yes	Yes
1395-ICPP-SCI-P-226	Yes	Yes		1405-ICPP-SCI-P-252	Yes	Yes
1396-ICPP-SCI-P-227	Yes	Yes		1397-ICPP-SCI-P-228	Yes	Yes
NEW CPP-1800	Yes	Yes		*NEW* CPP-1831	Yes	Yes
NEW CPP-1801	Yes	Yes		*NEW* CPP-1881	Yes	Yes
NEW CPP-1804	Yes	Yes		*NEW* CPP-1882	Yes	Yes
NEW CPP-1807	Yes	Yes		*NEW* CPP-1883	Yes	Yes
NEW CPP-1829	Yes	Yes				

Table 8. Institutional control sites inspection at WAG 3, Group 5 (Snake River Plain Aquifer).

Well Number	Label	Locked		Well Number	Label	Locked
USGS-34	Yes	Yes		USGS-77	Yes	Yes
USGS-35	Yes	Yes		USGS-82	Yes	Yes
USGS-36	Yes	Yes		USGS-84	Yes	Yes
USGS-37	Yes	Yes		USGS-85	Yes	Yes
USGS-38	Yes	Yes		USGS-111	Yes	Yes
USGS-39	Yes	Yes		USGS-112	Yes	Yes
USGS-40	Inaccessible			USGS-113	Yes	Yes
USGS-41	Inaccessible			USGS-114	Yes	Yes
USGS-42	Inaccessible			USGS-115	Yes	Yes
USGS-43	Yes	Yes		USGS-116	Yes	Yes
USGS-44	Yes	Yes		USGS-121	Yes	Yes
USGS-45	Yes	Yes		USGS-122	Yes	Yes
USGS-46	Yes	Yes		USGS-123	Inaccessible	
USGS-47	Inaccessible			USGS-128	Yes	Yes
USGS-48	Yes	Yes		LF2-08	Yes	Yes
USGS-49	Inaccessible			LF2-09	Yes	Yes
USGS-51	Inaccessible			LF2-10	Yes	Yes

Table 8. (continued).

Well Number	Label	Locked		Well Number	Label	Locked
USGS-52	Inaccessible			LF2-11	Yes	Yes
USGS-57	Inaccessible			LF2-12	Yes	Yes
USGS-59	Yes	Yes		LF3-08	Yes	Yes
USGS-67	Yes	Yes		LF3-09	Yes	Yes
MW-18	Yes	Yes		LF3-10	Yes	Yes
				USGS-77	Yes	Yes

Table 9. Institutional control sites inspection at WAG 3, Group 6 (buried gas cylinders).

Site	Signs	Comments	CFLUP Review
CPP-94	Removed signs	No hazards remain	Removed record
CPP-84	Removed signs	No hazards remain	Removed record

Table 10. Institutional control sites inspection at WAG 3, Group 7 (SFE-20 hot waste tank system).

Site	Signs	Comments	CFLUP Review
CPP-69	Good condition	CERCLA barriers in place	Remedy in progress

Institutional controls at INTEC were found to be in correct order during the 2005 assessment. The remedies at several sites are complete: CPP-84, CPP-94, and CPP-67. CPP-34 and CPP-69 were being remediated. Corner markers, noted on the log sheets as "boundary monuments," were in place. All wells that were accessible were found to be properly locked and labeled. Several new wells have been assessed and are shown on the Group 4 listing in Table 7. The wells that are listed as "inaccessible" could not be visited because of remedial activities, construction in the area, or fencing barricades.

The management of soil disturbances at WAG 3 is handled with notices of soil disturbance (NSDs). During FY 2004, two NSDs were submitted to the regulatory agencies for approval. Additionally, one NSD was ongoing from previous years. The status of these NSD activities is listed in Table 11.

Table 11. NSDs during FY 2004.

NSD Number/ Approval Date	Title	CERCLA Soil[a] Encountered?	Comments
NOD-02-03, 08/08/02	Cathodic Protection Upgrade	Yes	Work was completed in FY 2004. CERCLA soil was found, removed, and boxed in CPP-88 east of the stack. The contaminated soil was managed as CERCLA waste.
NSD-04-01 Rev. 2	2004 Footprint Reduction	None	Work continued in FY 2005.
NSD-04-02 Rev. 1	Fire Hydrant Replacement	None	Work completed, NSD closed.

a. CERCLA soil is soil in which contamination has been detected above the WAG 3 remediation goal.

The WAG 3 CFLUP records (DOE-ID 1997) were reviewed and updated electronically as part of the FY 2005 assessment. The CERCLA module of the CFLUP is available electronically at http://cflup.inel.gov. Photographs of many WAG 3 sites have been updated as part of the 2005 assessment.

5. WAG 4, CENTRAL FACILITIES AREA

CFA, designated as WAG 4, has been used since 1949 to house many of the support services for all of the INL Site operations, e.g., laboratories, security operations, fire protection, a medical facility, communication systems, warehouses, a cafeteria, vehicle and equipment pools, and the bus system.

Five institutionally controlled areas were assessed at WAG 4 on April 27, 2005: CFA-01, CFA-02, CFA-03 (three landfills), CFA-07 (the French drain), and CFA-08 (the sewage plant drain field). Institutional controls at WAG 4 were found to be in proper order and correct. No recommendations were needed. Refer to Table 12 for a summary of the assessment.

The WAG 4 CFLUP records (DOE-ID 1997) were reviewed electronically as part of the FY 2005 assessment. All records were found to be correct. The CERCLA module of the CFLUP is available electronically at http://cflup.inel.gov.

Table 12. Institutional control sites inspection at WAG 4.

Site	Signs	Comments	CFLUP Review	Actions Needed
CFA-01	Good condition	None	No change	None
CFA-02	Good condition	None	No change	None
CFA-03	Good condition	None	No change	None
CFA-07	Good condition	None	No change	None
CFA-08	Good condition	None	No change	None

6. WAG 5, CRITICAL INFRASTRUCTURE TEST RANGE COMPLEX/AUXILIARY REACTOR AREA

The CITRC, formerly PBF, and the ARA make up WAG 5. The areas are fairly close and were both experimental reactor facilities built in the 1950s.

The 2005 institutional control assessment was performed on June 14, 2005 at WAG 5. Seventeen institutionally controlled areas were inspected: ARA-01, ARA-02, ARA-03, ARA-06, ARA-07, ARA-08, ARA-12, ARA-16, ARA-23, ARA-24, ARA-25, PBF-10, PBF-12, PBF-13, PBF-21, PBF-22, and PBF-26. Refer to Table 13 for summary of the assessment.

Table 13. Institutional control sites inspection at WAG 5.

Site	Signs	Comments	CFLUP Review
ARA-01	Removed; remedy and remedial action report completed	Remedy completed	Removed from CFLUP
ARA-02	Removed; remedy and remedial action report completed	Remedy completed	Removed from CFLUP
ARA-03	No sign present	Replacement obtained	Revised
ARA-06	Good condition	None	No change
ARA-07	Sign missing	Replacement obtained	No change
ARA-08	Good condition	None	No change

Table 13. (continued).

Site	Signs	Comments	CFLUP Review
ARA-12	Removed; remedy and remedial action report completed	Remedy completed	Removed from CFLUP
ARA-16	Removed; remedy and remedial action report completed	Remedy completed	Removed from CFLUP
ARA-23	Good condition	None	No change
ARA-24	Good condition	None	No change
ARA-25	Good condition	Monument to be positioned	No change
PBF-10	Good condition	None	No change
PBF-12	Good condition	None	No change
PBF-13	Good condition	None	No change
PBF-21	Good condition	None	No change
PBF-22	Good condition	None	No change
PBF-26	Good condition	None	No change

Most institutionally controlled areas at WAG 5 were in good condition, with the institutional controls operating as planned. ARA-07 was missing the warning sign, which is being replaced. All remedial activity in the area is complete, with several sites no longer requiring warning signs.

The WAG 5 CFLUP records (DOE-ID 1997) were reviewed and updated electronically as part of the FY 2005 assessment. The CERCLA module of the CFLUP is available at http://cflup.inel.gov. New photographs of some WAG 5 sites have been uploaded to the electronic version of the CFLUP.

7. WAG 6, BOILING WATER REACTOR EXPERIMENT

WAG 6 consists of the Experimental Breeder Reactor (EBR) I, now a historic landmark, and the nearby BORAX facility. Five institutionally controlled areas require annual inspection at WAG 6: BORAX-01, BORAX-02, BORAX-08, BORAX-09, and EBR-08. The WAG 6 institutional control sites were visited on June 8, 2005. Refer to Table 14 for results of the assessment.

Table 14. Institutional control sites inspection at WAG 6.

Site	Signs	Comments	CFLUP Review
BORAX-01	Good condition	None	No change
BORAX-02	Good condition	None	No change
BORAX-08	Good condition	None	No change
BORAX-09	Good condition	None	No change
EBR-08	Good condition	None	No change

The WAG 6 CFLUP records (DOE-ID 1997) were reviewed as part of the FY 2005 assessment and were found to be in good order. The records are available electronically at http://cflup.inel.gov. New photographs of the WAG 6 sites were obtained and placed in the CFLUP.

8. WAG 7, RADIOACTIVE WASTE MANAGEMENT COMPLEX

The RWMC, which is designated as WAG 7, is located in the southwestern quadrant of the INL Site. There are three OUs at WAG 7: OU 7-08 (organic contamination in the vadose zone [OCVZ]), OU 7-12 (Pad A), and OU 7-10 (Pit 9). Each of these OUs is located within the Subsurface Disposal Area of the RWMC. The institutional control signs placed at each corner of Pad A are inspected quarterly. Signs are also posted at the OCVZ units. In addition, institutional control signs are in placed on the perimeter fence of the Subsurface Disposal Area and are inspected annually.

The 2005 assessment was performed on May 4, 2005. Warning signs were observed around the perimeter of the SDA and at Pad A and OCVZ. No deficiencies or recommendations were noted. The WAG 7 CFLUP records (DOE-ID 1997) were reviewed and found to be current.

9. WAG 9, MATERIALS AND FUELS COMPLEX

WAG 9 is composed of the MFC, formerly ANL-W. CERCLA sites at WAG 9 include tanks and wastewater handling and disposal systems such as ditches, ponds, pits, and drains. Contaminants at these sites include metals (beryllium and chromium) and radionuclides (such as neptunium-237, cesium-137, strontium-90, and americium-241). Cleanup actions at WAG 9 have consisted of the removal of radioactively contaminated sludge from the EBR II leach pit and the leach pit walls, ceiling, and piping; the removal of radioactive wastes (i.e., sludges, water, and piping) from the industrial/sanitary waste lift station; and the removal of piping from a lift station (sump) that leads to the leach pit.

Currently, two CERCLA sites at the MFC require institutional controls. These areas are the industrial waste pond (ANL-01) and the interceptor canal (ANL-09). The ANL-09 site has been further subdivided into the interceptor canal-ditch and the interceptor canal-mound because of the distinct differences in the soil in the ditch and the dredged and stockpiled soil of the mound. These three areas have radiological contamination from cesium-137. The contamination level is below action levels but greater than background. All three sites have institutional controls in place; specifically, warning signs are visible around the site perimeters. The interceptor canal-mound and the area above the high-water mark in the industrial waste pond were seeded in the fall of 2004 and are scheduled for inspection in October 2005. The interceptor canal-canal was not revegetated, because it is still used to convey rain and snowmelt from a 14-mi^2 area south of the MFC to the industrial waste pond.

Additionally, the sanitary sewage lagoon (ANL-04) is a CERCLA site that presents an ecological risk because of mercury levels in the sludge. The remediation of this site has been transferred to OU 10-08. Final remediation will be conducted after the useful life of the sanitary sewage lagoons, which is anticipated to be 2033. Remediation might not be required if, during the evaluation of the OU 10-08 baseline risk assessment, the human and ecological risks are found to be acceptable. Currently, the risk from the mercury is mitigated by maintaining the liquid level in the lagoon to cover the sludge. This eliminates the exposure pathway to small burrowing mammals. In 2005, the liquid level was inspected by the ANL-W environmental monitoring staff during collection of the liquid effluent samples. The liquid level at ANL-04 was found to be protective in 2005.

The WAG 9 CFLUP records (DOE-ID 1997) were entered as part of the FY 2005 assessment. The CERCLA module of the CFLUP is available electronically at http://cflup.inel.gov.

10. WAG 10, INL SITEWIDE AREA

WAG 10 consists of the INL Site area that lies outside the boundaries of the other WAGs and includes miscellaneous surface sites and liquid disposal areas. WAG 10 also encompasses areas beyond the INL Site boundaries when such areas have been or might have been impacted by INL activities. Sitewide groundwater concerns also fall within WAG 10 and are managed separately from institutional controls.

WAG 10 includes areas where explosive ordnance items are present due to activities that occurred from 1942 through 1950, when portions of the present-day INL Site made up the Arco Naval Proving Ground. Projectiles (explosive and inert), explosive materials, and ordnance explosive wastes litter many parts of the INL Site even today. Radioactively contaminated soil, unexploded ordnance, and explosive residues have been removed from several areas of the INL Site. Chemically contaminated soil and explosive materials have been disposed of during several cleanup actions.

Although much of the WAG 10 is assumed to be uncontaminated, 28 sites within WAG 10 are institutionally controlled in accordance with the *INEEL Sitewide Institutional Controls Plan* (DOE-ID 2004). The areas were assessed between May 11 and June 23, 2005, for the condition of warning signs, the general condition of the site, and the effectiveness of controls. All institutional controls were found to be in good condition. No recommendations were noted. Refer to Table 15 for a listing of the sites and a summary of the 2005 assessment.

Table 15. Institutional control sites inspection at WAG 10.

Site	Signs	Comments	CFLUP Review
OMRE-01	Good condition	None	No change
ORD-01	Good condition	None	No change
ORD-03	Good condition	None	No change
ORD-04	Good condition	None	No change
ORD-05	Good condition	None	No change
ORD-06	Good condition	None	No change
ORD-07	Good condition	None	No change
ORD-08	Good condition	None	No change
ORD-09	Good condition	None	No change
ORD-10	Good condition	None	No change
ORD-11	Good condition	None	No change
ORD-12	Good condition	None	No change
ORD-13	Good condition	None	No change
ORD-14	Good condition	None	No change
ORD-15	Good condition	None	No change
ORD-16	Good condition	None	No change
ORD-17	Good condition	None	No change
ORD-18	Good condition	None	No change
ORD-19	Good condition	None	No change
ORD-20	Good condition	None	No change

Table 15. (continued).

Site	Signs	Comments	CFLUP Review
ORD-21	Good condition	None	No change
ORD-22	Good condition	None	No change
ORD-24	Good condition	None	No change
ORD-25	Good condition	None	No change
ORD-26	Good condition	None	No change
ORD-27	Good condition	None	No change
ORD-28	Good condition	None	No change
STF-02	Good condition	None	No change

The WAG 10 CFLUP records (DOE-ID 1997) were reviewed as part of the FY 2005 assessment and found to be in good order. The CERCLA module of the CFLUP is available electronically at http://cflup.inel.gov.

11. REFERENCES

DOE-ID, 1991, *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory,* Administrative Record No. 1088-06-29-120, U.S. Department of Energy Idaho Operations Office; U.S. Environmental Protection Agency, Region 10; Idaho Department of Health and Welfare, December 4, 1991.

DOE-ID, 1997*, Idaho National Engineering and Environmental Laboratory Comprehensive Facility and Land Use Plan,* DOE/ID-10154, U.S. Department of Energy Idaho Operations Office, December 1997. (Official Use Only) Unclassified version available at http://cflup.inel.gov.

DOE-ID, 2004, *INEEL Sitewide Institutional Controls Plan,* DOE/ID-11042, Rev. 1, U.S. Department of Energy Idaho Operations Office, June 2004.